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PRIMARY RESEARCH

Sensitivity of Firm Size Measures to Practices of Corporate Finance: Evidence from Sharī'ah Compliant Firms

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Abstract. The aim of this study is to analyse the impact of different measures of firm size (total assets, total sales, market value of equity share and total number of employees) on six different practices of corporate finance, namely financial policy, investment policy, diversification, financial performance, corporate governance and dividend policy. Further, study examines the sensitivity of different measures of size towards these practices of corporate finance based on R^2, sign and significance of beta co-efficient. Researchers used data from Sharī'ah compliant firms i.e., KMI-30 index (Karachi Meezan index of Sharī'ah compliant firms) for a period of 8 years i.e., 2010-2017. Using panel data analysis technique, the researchers found that in Sharī'ah compliant firms, different proxies of size are differently related with the practices of corporate finance. The results have serious implications for researchers as the study confirms the presence of "measurement effect" in "size effect". Researchers thus need to be careful when selecting any proxy of firm size for their research using Sharī'ah compliant firms, keeping in mind the scope and context of their work.

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INTRODUCTION

The construct of firm size has remained a major area of investigation in empirical finance. Researchers have examined the effect of firm size on different firm level policies including capital structure (Frank & Goyal, 2003; Kurshev & Strebulaev, 2007), financial policy (Ebel-Ezoha, 2008; Evan, 2008), dividend policy (Baker, Saadi, Dutta, & Gandhi, 2007; Eriotis,

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2005; Uwuigbe, Jafaru, & Ajayi, 2012), leverage (Rajan & Zingales, 1995), and merger and acquisition (Moeller, Schlingemann, & Stulz, 2004). Dang, Li, and Yang (2018) noted that despite such enormous research on firm size in empirical finance, no researcher has ever provided justification for the use of any proxy of size used in that research. For robustness issue, caution should be exercised when interpreting results generated by using single proxy of size (Dang et al., 2018). This issue is of pertinent importance as it has led to inconclusive results in past studies e.g., in the field of capital structure. Evan (2008) noted that the mixed results on relationship between size and leverage are due to the use of different measures of size in different papers. It is thus important to examine the sensitivity of size with different practices of corporate financial policy due to its implications for investors and managers (Dang et al. 2018).

One of the most important and increasingly growing investor of present times is Islamic investor (Derigs & Marzban, 2008; Reddy, Mirza, Naqvi, & Fu, 2017). Most important factor for an Islamic investor is that the company he/she is investing in should adhere to the laws and principles of Islam, collectively called the Sharī'ah. These laws and principles come from three sources i.e., the Holy Qur'ān (the sacred book Muslims believe in and taking it as the first source of guidance), authentic *ḥadīth* (the authentically recorded sayings and actions of the final Prophet, Muhammad (PBUH), and *ijtihād* (Dutton, 2013). Firms that adhere to these principles and tenets are termed as "Sharī'ah-compliant firms".

There are different indices which use different screenings to classify firms as Sharī'ah compliant or non- compliant, first among which was Dow Johns Islamic Index (DJII) established in 1995. Other indices include Financial Times Islamic Index Series (FTSE), Standard & Poor Sharī'ah Index (S&P), Kuala Lumpur Stock Exchange Sharī'ah Index (KLSESI), Morgan and Stanley Capital International Islamic Index (MSCI) and Meezan Pakistan (Waris, Hassan, Abbas, Mohsin, & Waqar, 2018). Meezan Pakistan i.e., KSE Meezan Index (KMI-30) is an index of 30 companies that comply with the Sharī'ah standards.

This study thus aims at analysing the sensitivity of firm size measures on practices of finance using KMI-30 firms. We specifically focused on the same firm level practices (i.e., financial policy, investment policy, dividend policy, diversification, firm performance and corporate governance) as used in Dang et al. (2018) with exception of managerial compensation and incentives, and mergers, acquisition and corporate control which we could not include due to unavailability of data on these variables among KMI-30 firms. Similarly, for the proxies/measures of firm size, we used the same three measures as used by Dang et al. (2018) i.e., total assets, total sales and market capitalization, and added one measure i.e., total number of employees as Dang et al. (2018) noted that number of employees could be the fourth most used measure of size in managerial research. This study is first of its kind that comprehensively examines the relationship between firm size (using different measures) and different practices of corporate finance and sensitivity of the different firm size measures on practices of finance using KMI-30 index.

LITERATURE REVIEW

Firm Size and Financial Policy-Leverage

Financial policy refers to the decision of debt and equity financing commonly known as leverage. Previous research on firm size and leverage has shown mixed results. Some studies have found the relationship to be positive e.g., Coleman and Cohn (1999), Ezoha (2008), and Gonenc (2005). Some have reported a negative relationship e.g., Cooley and Quandrini, (2001) and Nor and Ariffi (2006). Evan (2008) noted that difference between the results is because all these studies have employed different measures of firm size. Theoretically, large firms have more opportunities to grow, thus more financing needs, which they fulfil by going for debt financing due to its advantage. On the contrary, Islam prohibits use of debt due to the involvement of interest. Prophet Muhammad (PBUH) has been reported to have said in his prayers that:

"O Allah, I seek refuge with You from sin and heavy debt". Someone said to him: "How often you seek refuge from heavy debt!" He said: "When a man gets into debt, he speaks and tells lies, and he makes a promise and breaks it." (Bukhari and Muslim).

Incurring debt is not prohibited, of course. The Prophet himself got loans and purchased on credit (Ayub, 2007). Hence, the Sharī'ah scholars and the Sharī'ah advisory bodies allow the firms to take and give loans/debts without involvement of interest.

The data used in this study is from KMI-30 firms. One of the screens used by KMI to classify firms as Sharī'ah compliant is that the firm must not have a leverage ratio (i.e., percentage of debt in total assets) greater than 37%. Based on this, we expect that there must not be any difference in leverage based on size (using any proxy) of Sharī'ah compliant firms. Thus, we hypothesize that:

H1: Firm size has no relationship with debt ratio/or the extent of financial leverage in Sharī'ah compliant firms.

Firm size and business diversification: Diversification refers to the number of businesses a company is operating in, or the avenues investing in. Theoretically, large firms have more resources (assets, sales etc.) which make it easier for them to diversify their lines of businesses. Previously, researchers have found significant positive relationship between the two e.g., Purkayastha, Manolova, and Edelman (2012) and Untoro and Rahardian (2015). There is no restriction imposed by Islam regarding diversification. Thus, we expect the same relationship between size and diversification in Sharī'ah compliant stocks as of the conventional firms.

H2: Firm size has a significant relationship with business diversification in Sharī'ah compliant firms.

Firm size and level/extent of investment (CAPEX): One of the pillars of investment policy deals with the investment expenditure a firm is incurring i.e., capital expenditures. These are expenditures which create future benefits and are expenditures on plant, property and equipment (Damodaran, 2012). Previously, Cohen and Klepper (1996) found that firm size

and investment in R&D are positively related, as the investment in R&D increases relatively with the firm size. Many other studies have also found significant relationship between size and investment policy (investment in capital expenses, cash flows, etc.) e.g., Connolly and Hirschey (2005), Daunfeldt and Hartwig (2013) and Hartwig (2012). We can expect the same relationship between size and extent of investment in Sharī'ah compliant firms. Thus,
H3: Firm size has a significant relationship with the level of investment in capital expenditure in Sharī'ah compliant firms.

Firm size and financial performance: A number of studies have found a significant positive relationship between firm size and financial performance e.g., see Karadeniz, Kandr, Iskenderoglu, and Onal, (2011), Lee (2009), Saliha and Abdessatar (2011), Serrasqueiro and Nunes, (2008), and Stierwald (2009). On the other hand there are others reporting a negative relationship between size and financial performance (e.g., see Banchuenvijit & Pariyanont, 2012). The difference again is because of the usage of different proxies of size. However, the school of thought who argues a positive relationship between size and performance appears more dominating in literature. Thus, we hypothesize:
H4: Firm size has a significant relationship with financial performance in Sharī'ah compliant firms.

Firm size and corporate governance (Board structure): Mayer (1997) defined corporate governance as the way through which we resolve the conflict of interest between shareholders and managers and ensure that firms work only for the benefits of the shareholders. One of main mechanism of corporate governance is the presence of Non-Executive Directors (NEDs) on the board. Though, arguably with increase in size of firm, presence of (NEDs henceforth) on the board should increase. Yet, past research has shown mixed results on the relationship of NEDs and performance of the firm e.g., Denis, Denis, and Sarin (1997) reported a positive, whereas Agrawal and Knoeber (1996) found a negative relationship between number of NEDs and performance of firm. Keeping this in view, we can expect that larger firms may avoid having more NEDs on board. We expect the same to happen in Sharī'ah compliant firms. Thus, we hypothesize that:
H5: Firm size has a significant relationship with board structure (i.e., number of NEDs) in Sharī'ah compliant firms.

Firm size and dividend policy: Dividend pay-out is one of the most important concepts of corporate finance. Agency theory of Jensen and Meckling (1976) argues that dividend acts as a protection for the investors. Similarly, signaling theory of Ross (1977) tells that dividend acts as a good signal to the market regarding financial health of the company. Firms thus will prefer to pay dividend rather to retain earnings. Large firms are mature and thus can pay more dividends (Fama & French, 2001). So, theoretically, it can be argued that large firms shall have more dividend payout than small firms. However, previous research on the area has shown results in both directions e.g., Deshmukh, Goel, and Howe (2003), Ranti (2013), Baker et al., (2007) reported a positive, whereas Azeem, Akbar, and Usman

(2011) reported a negative relationship between the two. We thus hypothesize that:
H6: Firm size has a significant relationship with dividend policy in Sharī'ah compliant firms.

Sensitivity of firm size measures towards corporate finance practices: It is evident in above literature review that despite the importance and empirical research on the area of firm size, no conclusive results have been drawn regarding its relationship with different practices of corporate finance. The reason behind the difference in results is because of the different proxies of firm size employed in those various researches (Dang et al., 2018; Evan, 2008). We thus also expect that the results of size with different practices of corporate finance will be different in terms of R^2, significance of beta and sign of beta value when different proxies of size are employed in Sharī'ah compliant firms. Thus, we hypothesize that:
H7: Different measures of firm size have different sensitivities regarding different practices of corporate finance.

METHODOLOGY

Data

Data was collected from all 30 companies of KMI-30 index for a period of 8 years i.e., 2010-2017. We used KMI-30 index as it is the only index of Sharī'ah complaint stocks within Pakistan. Further, Rana and Akhter (2015) have argued that KMI-30 index not just increases investors' trust and enhance their participation, but is a tool for research on Sharī'ah complaint stocks. The KMI-30 index, introduced in 2008, uses six key tests/screens to classify companies as Sharī'ah compliant or non-Sharī'ah compliant (Waris et al., 2018). The first screen is that the main activity of a business should be *ḥalāl* i.e., the business should not deal in activities related to pork meat, alcoholic products, conventional banking and insurance, entertainment, and production of weapon. The rest of the screens are all financial screens which include:

- Debt to total assets ratio should not exceed 37%,
- Non-compliant investments to total assets ratios should not be more than 33%,
- Ratio of non-compliant income to total assets should not be more that 5%,
- Illiquid assets should not increase over 25% of total assets
- Market price per share must be more than net liquid assets per share (Derigs & Marzban, 2008; Waris et al., 2018).

We used the annual reports of the companies to extract data for our variables of interest.

Measures Used in Study

Following Coles and Li (2012) and Dang et al. (2018), we used four measures i.e., total assets, total sales, market value of equity and number of employees to proxy for firm size. In order to normalize the data, natural logarithmic values of all measures were taken. Dang et al. (2018) in their survey of 100 research papers on firm size showed these four proxies/measures as the most used measures. Further, it may be argued that the choice of any

specific measure is dependent upon the purpose of study and data availability (Hart & Oultan, 1996; Prowse, 1992). Previous studies, however, don't provide any justification for the use of specific measure of size for specific area of corporate finance (Dang et al., 2018).

Details of the other variables of interest used in this study and their calculations are summarized in Table 1 below.

TABLE 1
Measures Employed in Study

Variable	Nature of Variable	Proxy	Measure
Firm Size	IV	Total Assets	Ln (total assets)
		Total Sales	Ln (total sales)
		Market Value of Equity	Ln (MVE)
		Number of Employees	Ln (number of employees)
Financial Policy	DV	Debt to equity ratio	Debt/equity
Investment Policy	DV	Capital expenditure	CAPEX/total assets
Diversification	DV	Business segments	Ln (No of business segments)
Performance	DV	ROA	Return on Assets
Corporate Governance	DV	NEDs	Ln (No of non-executive directors)
Dividend Policy	DV	Dividend policy	Dividend payout

Control Variables

Control variables for each model have been identified based upon the previous literature of that area and those as used by Dang et al. (2018). The study has not used all the controls as identified in the benchmark papers; rather only those variables that are repeatedly and consistently used in the most of these papers are retained. The bench mark paper for firm performance was of Mehran (1995), for board structure it was of Frank and Goyal (2009), Linck, Netter, and yang (2008); for leverage; and Coles, Daniel, and Naveen (2006) for investment policy and diversification.

Estimation Models

Given below are our main estimation equations used for analysis purpose;

Financial Leverage (Debt/Equity):

$$\text{Financial Leverage} = C + \beta(ROA_{i,t}) + \beta(ln(\text{totalasset})_{i,t}) + \mu_{i,t} \quad (1)$$

$$\text{Financial Leverage} = C + \beta(ROA_{i,t}) + \beta(ln(\text{totalsales})_{i,t}) + \mu_{i,t} \quad (2)$$

$$\text{Financial Leverage} = C + \beta(ROA_{i,t}) + \beta(ln(MVE)_{i,t}) + \mu_{i,t} \quad (3)$$

$$\text{Financial Leverage} = C + \beta(ROA_{i,t}) + \beta(ln(\text{number of employee})_{i,t}) + \mu_{i,t} \quad (4)$$

Investment Policy:

$$\text{CAPEX} = C + \beta(\text{bookleverage}_{i,t}) + \beta(ln(\text{totalasset})_{i,t}) + \mu_{i,t} \quad (5)$$

$$\text{CAPEX} = C + \beta(\text{bookleverage}_{i,t}) + \beta(ln(\text{totalsales})_{i,t}) + \mu_{i,t} \quad (6)$$

$$\text{CAPEX} = C + \beta(\text{bookleverage}_{i,t}) + \beta(ln(\text{MVE})_{i,t}) + \mu_{i,t} \quad (7)$$

$$\text{CAPEX} = C + \beta(\text{bookleverage}_{i,t}) + \beta(ln(\text{numberofemployee})_{i,t}) + \mu_{i,t} \quad (8)$$

Diversification:

$$\text{Buisness Segments} = C + \beta(\text{bookleverage}_{i,t}) + \beta(ROA_{i,t}) + \beta(ln(\text{totalasset})_{i,t}) + \mu_{i,t} \quad (9)$$

$$\text{Buisness Segments} = C + \beta(\text{bookleverage}_{i,t}) + \beta(ROA_{i,t}) + \beta(ln(\text{totalsales})_{i,t}) + \mu_{i,t} \quad (10)$$

$$\text{Buisness Segments} = C + \beta(\text{bookleverage}_{i,t}) + \beta(ROA_{i,t}) + \beta(ln(\text{MVE})_{i,t}) + \mu_{i,t} \quad (11)$$

$$\text{Buisness Segments} = C+\beta(\text{bookleverage}_{i,t})+\beta(ROA_{i,t})+\beta(ln(\text{numberofemployees})_{i,t})+\mu_{i,t} \quad (12)$$

NEDs:

$$NED = C + \beta(\text{businessegments}_{i,t}) + \beta(\text{performance}_{i,t}) + \beta(ln(\text{totalasset})_{i,t}) + \mu_{i,t} \quad (13)$$

$$NED = C + \beta(\text{businessegments}_{i,t}) + \beta(\text{performance}_{i,t}) + \beta(ln(\text{totalsales})_{i,t}) + \mu_{i,t} \quad (14)$$

$$NED = C + \beta(\text{businessegments}_{i,t}) + \beta(\text{performance}_{i,t}) + \beta(ln(\text{MVE})_{i,t}) + \mu_{i,t} \quad (15)$$

$$NED = C + \beta(\text{businessegments}_{i,t}) + \beta(\text{performance}_{i,t}) + \beta(ln(\text{numberofemployees})_{i,t}) + \mu_{i,t} \quad (16)$$

Performance:

$$ROA = C + \beta(\text{businessegments}_{i,t}) + \beta(\text{bookleverage}_{i,t}) + \beta(ln(\text{totalasset})_{i,t}) + \mu_{i,t} \quad (17)$$

$$ROA = C + \beta(\text{businessegments}_{i,t}) + \beta(\text{bookleverage}_{i,t}) + \beta(ln(\text{totalsales})_{i,t}) + \mu_{i,t} \quad (18)$$

$$ROA = C + \beta(\text{businessegments}_{i,t}) + \beta(\text{bookleverage}_{i,t}) + \beta(ln(\text{MVE})_{i,t}) + \mu_{i,t} \quad (19)$$

$$ROA = C + \beta(\text{businessegments}_{i,t}) + \beta(\text{bookleverage}_{i,t}) + \beta(ln(\text{numerofemployees})_{i,t}) + \mu_{i,t} \quad (20)$$

Dividend Policy:

$$\text{Dividendpayout} = C + \beta(\text{bookleverage}_{i,t}) + \beta(ln(\text{totalasset})_{i,t}) + \mu_{i,t} \quad (21)$$

$$\text{Dividendpayout} = C + \beta(\text{bookleverage}_{i,t}) + \beta(ln(\text{totalsales})_{i,t}) + \mu_{i,t} \quad (22)$$

$$\text{Dividendpayout} = C + \beta(\text{bookleverage}_{i,t}) + \beta(ln(\text{MVE})_{i,t}) + \mu_{i,t} \quad (23)$$

$$\text{Dividendpayout} = C + \beta(\text{bookleverage}_{i,t}) + \beta(ln(\text{numberofemployees})_{i,t}) + \mu_{i,t} \quad (24)$$

Here, ROA = Return on Assets, NED = Non-Executive Directors, MVE = Market Value of Equity, CAPEX = Capital Expenditure, μ = error term, i = cross-section, t = time-period

Analysis Technique

Correlation analysis and panel data regression have been used for analysis purpose. We used both pool data regression and fixed v/s random effect regression based on Hausman test.

RESULTS

Descriptive Statistics and Correlation Analysis

Descriptive statistics and correlation analysis are shown in Table 2 below. Total number of observations of the study are 240. It can be seen from the Table that different proxies of firm size are differently correlated with dependent variables. In case of financial leverage (debt to equity) different proxies yield different values of correlation coefficients: -0.06 for MVE, 0.17 for total assets, 0.16 for total sales and 0.04 for number of employees. For business segments: correlation coefficient for relationship of MVE-business segments is -0.07, for total asset- business segments is 0.01, total sales- business segments is 0.03 and for number of employees- business segments is 0.07. Correlation coefficient for relationship of MVE-CAPEX is -0.03, for total asset-CAPEX is -0.02, total sales-CAPEX is 0.001 and for

number of employees-CAPEX is 0.01. This shows that all proxies are related with business diversification, yet there is a difference between the intensity of it.

Table 2 also shows that different proxies of firm size are differently correlated with ROA. In case of ROA, the correlation coefficients are 0.51 for MVE-ROA relationship, 0.46 for total assets-ROA, 0.51 for total sales-ROA and 0.17 for number of employees-ROA relationship. For NEDs, different proxies yield different correlation coefficients; -0.44 for MVE, -0.35 for total assets, 0.36 for total sales and 0.17 for number of employees. In case of dividend policy, correlation co-efficient is 0.20 for MVE, 0.32 for total assets, 0.34 for total sales and 0.14 for number of employees. These results of our correlation analysis give a univariate and initial support for our hypotheses 1 through 8. High correlation values between different proxies of firm size (i.e., total assets, sales, market value of equity and number of employees) are also evident in the Table. The reason for such high correlation is the fact that these proxies are actually measuring same thing i.e., firm size. However, they are all theoretically different and capture different aspect of firm size (Dang et al., 2018). Thus, they are considered as separate variables.

Regression Analysis

The study employed panel data regression technique. First, pooled regression (common co-efficient) was applied. Then, fixed v/s random effect regression was used. Criteria for selection between fixed v/s random effect is Hausman test. Table 3 reports results of Hausman test and the decision based on the test.

Firm size and financial policy: Results of relationship between size and financial policy i.e., leverage (debt/equity) are reported in Table 4. Results of pooled OLS regression show that size as measured by total assets and financial leverage ($\beta = 0.19, p < 0.01$), total sales and financial leverage ($\beta = 0.14, p < 0.05$), MVE and financial leverage ($\beta = 0.24, p < 0.01$) and no of employees and financial leverage ($\beta = 0.28$, $p < 0.01$) are significantly related, value of R^2 for all these models are 0.10, 0.08, 0.13 and 0.11 respectively. Hausman test (Table 3) shows that random effects regression is appropriate in case of all the four relationships. Results of random effects regression shows significant relationship between total assets and financial leverage ($\beta = 0.25$, $p < 0.05$), MVE and financial leverage ($\beta = 0.26$, $p < 0.01$), and number of employees and financial leverage ($\beta = 0.30$, $p < 0.05$) but no relationship between total sales and financial leverage ($\beta = 0.16$, ns). Value of R^2 for all the relationships are 0.08, 0.09, 0.07 and 0.07 respectively. These results doesn't support hypothesis H1. Despite non-acceptance of hypothesis, our results are robust i.e., there is no change in sign of regressor when different proxies of size are used. However, significance is changed in one case only.

Firm size and investment policy: Results of relationship between size and investment policy i.e., capital expenditure (CAPEX) are reported in Table 5. Results of pooled OLS regression shows that there is no relationship between total assets and CAPEX ($\beta = 0.00$, ns) and total sales and CAPEX ($\beta = 0.00$, ns). However, MVE and CAPEX are significantly related ($\beta =$

0.01, $p < 0.05$). Similarly, no of employees and CAPEX are also significantly related (β = 0.01, $p < 0.05$), value of R^2 for all these models are 0.01, 0.01, 0.02 and 0.02, respectively. Hausman test (Table 3) shows that random effect regression is appropriate in all cases except sales-CAPEX relationship. Results of fixed/random effect regression shows significant relationship between total assets and CAPEX (β = -0.02, $p < 0.05$), total sales and CAPEX (β = -0.02, $p < 0.05$), MVE and CAPEX (β = 0.01, $p < 0.10$), but relationship between number of employees and CAPEX is insignificant (β = 0.01, ns). Value of R^2 for all the variables are 0.25, 0.25, 0.02 and 0.01, respectively. Our results are robust for OLS as far as the sign of the regressor is concerned, but not in fixed effect regression. R^2 and significance value do change.

TABLE 2
Descriptive Statistics and Correlation Analysis

	Mean	Median	Max	Min	Std. Dev.	1	2	3	4	5	6	7	8	9	10
1. Debt to Equity	0.60	0.13	13.04	0.00	1.53	1.00									
2. CAPEX	2.46	2.00	8.00	1.00	1.73	-0.06	1.00								
3. Business Segments	0.07	0.05	0.67	0.00	0.09	0.03	-0.03	1.00							
4. Dividend Policy	8.49	2.50	21.0	2.07	18.9	0.03	-0.05	-0.01	1.00						
5. Non-executive director	5.21	5.00	19.00	0.00	2.73	0.05	-0.03	-0.03	-0.36	1.00					
6. ROA	9.81	8.80	53.85	(20.73)	9.56	0.03	-0.04	0.10	0.49	-0.81	1.00				
7. Size: Ln(MVE)	10.25	10.30	14.31	4.92	1.63	-0.06	-0.03	0.07	0.20	-0.44	0.51	1.00			
8. Size: Ln(Total Assets)	10.47	10.54	13.35	7.95	1.36	0.17	-0.02	-0.01	0.32	-0.35	0.46	0.33	1.00		
9. Size: Ln (Total Sales)	10.27	10.08	12.76	7.40	1.37	0.16	0.001	0.03	0.34	0.36	0.51	0.40	0.83	1.00	
10.Size: Ln (No. of employees)	7.20	7.10	9.32	3.40	1.12	0.04	0.01	0.07	0.14	0.17	0.17	0.30	0.37	0.43	1.00

TABLE 3
Results of Hausman Test

		Chi-square	D.F	*p*-value	Decision
Financial leverage (debt to equity)	Size: Ln (Total Asset)	0.80	2.00	0.67	Random Effect
	Size: Ln (Total Sales)	0.15	2.00	0.93	Random Effect
	Size: Ln (MVE)	0.10	2.00	0.95	Random Effect
	Size: Ln(Number of employees)	0.13	2.00	0.94	Random Effect
Capex	Size: Ln (Total Asset)	3.87	2.00	0.14	Random Effect
	Size: Ln (Total Sales)	5.04	2.00	0.08	Fixed Effect
	Size: Ln (MVE)	0.63	2.00	0.73	Random Effect
	Size: Ln(Number of employees)	0.65	2.00	0.72	Random Effect
Business Segment	Size: Ln (Total Asset)	4.68	3.00	0.20	Random Effect
	Size: Ln (Total Sales)	6.56	3.00	0.09	Random Effect
	Size: Ln (MVE)	1.94	3.00	0.59	Random Effect
	Size: Ln(Number of employees)	23.71	3.00	0.00	Fixed Effect
ROA	Size: Ln (Total Asset)	9.52	3.00	0.02	Fixed Effect
	Size: Ln (Total Sales)	24.34	3.00	0.00	Fixed Effect
	Size: Ln (MVE)	14.66	3.00	0.00	Fixed Effect
	Size: Ln(Number of employees)	14.66	3.00	0.00	Fixed Effect
Dividend Policy	Size: Ln (Total Asset)	7.04	2.00	0.03	Fixed Effect
	Size: Ln (Total Sales)	11.49	2.00	0.00	Fixed Effect
	Size: Ln (MVE)	10.70	2.00	0.00	Fixed Effect
	Size: Ln(Number of employees)	1.73	2.00	0.42	Random Effect
Non Executive Directors	Size: Ln (Total Asset)	4.97	3.00	0.17	Random Effect
	Size: Ln (Total Sales)	4.80	3.00	0.19	Random Effect
	Size: Ln (MVE)	3.63	3.00	0.30	Random Effect
	Size: Ln(Number of employees)	12.63	3.00	0.01	Fixed Effect

TABLE 4
Regression Analysis of Firm Size (Total Asset, Total Sales, MVE and No of Employees) and Financial Leverage

	(1) Pooled OLS	(2) Pooled OLS	(3) Pooled OLS	(4) Pooled OLS	(5) RE	(6) RE	(7) RE	(8) RE
C	-1.04^{ns}	-0.40^{ns}	-1.36**	-0.99^{ns}	-1.64^{ns}	-0.64^{ns}	-1.51*	-1.16^{ns}
ROA	-0.04 ***	-0.40***	-0.06 ***	-0.04 ***	-0.04 ***	-0.04***	-0.06***	-0.04***
Size: Ln (total assets)	0.19 ***				0.25 **			
Size: Ln (total sales)		0.14**				0.16^{ns}		
Size: Ln(MVE)			0.24***				0.26***	
Size: Ln (No of employees)				0.28 ***				0.30**
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.10	0.08	0.13	0.11	0.08	0.07	0.09	0.07
#Observations	240	240	240	240	240	240	240	240

Explanatory Variable: Leverage (Debt/Equity)
Models (1) to (4) represent simple pooled OLS results i.e., Common effect
Model (5) to (8) represent Fixed/Random effect regression based on results of Hausman test stated above
***, **,* represent 1%, 5% and 10% level of significance respectively, ns represents not significant.

TABLE 5
Regression Analysis of Firm Size (Total Asset, Total Sales, MVE and Number of Employees) and CAPEX

	(1) Pooled OLS	(2) Pooled OLS	(3) Pooled OLS	(4) Pooled OLS	(5) RE	(6) RE	(7) RE	(8) RE
C	0.09**	0.08*	-0.01^{ns}	-0.01^{ns}	0.32***	0.31***	-0.01^{ns}	-0.01^{ns}
Leverage	0.00^{ns}	0.00^{ns}	0.00^{ns}	-0.00^{ns}	0.01^{ns}	0.00^{ns}	0.00^{ns}	0.00^{ns}
Size: Ln(Assets)	0.00^{ns}				-0.02**			
Size: Ln(Sales)		0.00^{ns}				-0.02**		
Size: Ln(MVE)			0.01**				0.01*	
Size: Ln(No of employees)				0.01**				0.01ns
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.01	0.01	0.02	0.02	0.25	0.25	0.02	0.01
#Observations	240	240	240	240	240	240	240	240

Explanatory Variable: CAPEX (Net CAPEX scaled by Total Assets)
Models (1) to (4) represent simple pooled OLS results i.e., Common effect
Model (5) to (8) represent Fixed/Random effect regression based on results of Hausman test stated above
***, **,* represent 1%, 5% and 10% level of significance respectively, ns represents not significant.

Firm size and diversification: Results of relationship between size and diversification are reported in Table 6. Results of pooled OLS regression show no relationship between total assets and business segments (β = 0.02, ns), total sales and business segments (β = -0.13, ns), and no of employees and business segments (β = -0.03, ns), but MVE and business segments are significantly related ($\beta = 0.15, p < 0.05$). Value of R^2 for all these models are 0.02, 0.02, 0.04 and 0.02 respectively. Hausman test (Table 3) shows that random effects regression is appropriate in all cases except in the No. of employees-business segments relationship. Results of fixed/random effects regression show that there is a significant relationship between total assets and business segments ($\beta = 0.42, p < 0.01$), total sales and business segments (β = -0.04, $p < 0.01$), MVE and business segments are significantly related ($\beta = 0.16, p < 0.01$) and number of employees and business segments are significantly related (β = 1.39, $p < 0.01$).Value of R^2 for all the variables is 0.15, 0.21, 0.06 and 0.36 respectively. Our results are robust for sign and significance of regressor in case of fixed effects regression only. R^2 value changes in all cases.

Firm size and performance: Results of the relationship between size and firm performance (ROA) are reported in Table 7. Results of pooled OLS regression show that total assets and ROA are significantly related (β = -0.25, $p < 0.01$), total sales and ROA have no relationship (β = -0.28, ns), MVE and ROA are significantly related (β = 2.26, $p < 0.01$) no of employees and ROA have no relationship (β = 0.34, ns), value of R^2 for all these models is 0.09, 0.09, 0.23 and 0.09 respectively. Hausman test (Table 3) shows that fixed effects regression is appropriate in all cases. Results of fixed effects regression show a significant relationship between total assets and ROA ($\beta = 3.38, p < 0.01$), total sales and ROA are significantly related ($\beta = 5.49, p < 0.01$), MVE and ROA are significantly related ($\beta = 4.76, p < 0.01$) and number of employees and ROA have no relationship (β = 2.12, ns).The value of R^2 for all the variables are 0.57, 0.61, 0.72 and 0.56 respectively. The sign of coefficient

is robust to different measures of size in fixed effects regression only. Significance and R^2 value change in case of different proxies.

TABLE 6
Regression Analysis of Firm Size (Total Asset, Total Sales, MVE and Number of Employees) and Diversification

	(1) Pooled OLS	(2) Pooled OLS	(3) Pooled OLS	(4) Pooled OLS	(5) RE	(6) RE	(7) RE	(8) RE
C	2.55***	3.12***	1.38*	2.96***	-1.98***	-2.24***	0.84^{ns}	-7.58***
Leverage	-0.07^{ns}	-0.06^{ns}	-0.10**	-0.06^{ns}	0.01^{ns}	0.02^{ns}	0.02^{ns}	0.01^{ns}
Performance	-0.03 **	-0.03**	-0.04***	-0.03**	0.00^{ns}	-0.01*	-0.01^{ns}	0.00^{ns}
Size: Ln(Assets)	0.02^{ns}				0.42***			
Size: Ln(Sales)		-0.03^{ns}				0.46***		
Size: Ln(MVE)			0.15**				0.16***	
Size: Ln (No of employees)				-0.03^{ns}				1.39***
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.02	0.02	0.04	0.02	0.15	0.21	0.06	0.36
#Observations	240	240	240	240	240	240	240	240

Explanatory Variable: Number of Business Segment
Models (1) to (4) represent simple pooled OLS results i.e., Common effect
Model (5) to (8) represent Fixed/Random effect regression based on results of Hausman test stated above
***, **,* represent 1%, 5% and 10% level of significance respectively, ns represents not significant

TABLE 7
Regression Analysis of Firm Size (Total Asset, Total Sales, MVE and Number of Employees) and Diversification

	(1) Pooled OLS	(2) Pooled OLS	(3) Pooled OLS	(4) Pooled OLS	(5) RE	(6) RE	(7) RE	(8) RE
C	15.37**	15.68***	-9.84***	1.40***	-23.78**	-41.36***	-35.85***	-5.49^{ns}
Business Segments	-0.81^{ns}	-0.82**	-0.94***	-0.81**	-0.35^{ns}	-1.80*	-0.96^{ns}	0.35^{ns}
Financial leverage (debt to equity)	-1.59***	-1.60***	-1.99***	-1.69***	-1.47***	-1.30***	-1.32***	-1.39***
Size: Ln(Assets)	-0.25***				3.38***			
Size: Ln(Sales)		-0.28^{ns}				5.49***		
Size: Ln(MVE)			2.26***				4.76***	
Size: Ln (No of employees)				0.34^{ns}				2.12^{ns}
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.09	0.09	0.23	0.09	0.57	0.61	0.72	0.56
#Observations	240	240	240	240	240	240	240	240

Explanatory Variable: ROA
Models (1) to (4) represent simple pooled OLS results i.e., Common effect
Model (5) to (8) represent Fixed/Random effect regression based on results of Hausman test stated above
***, **,* represent 1%, 5% and 10% level of significance respectively; ns represents not-significant

Firm size and board structure: Results of relationship between size and board structure (No. of NED's) are reported in Table 8. Result of pooled OLS regression shows that total assets and NEDs have no relationship (β = -0.02, ns), total sales and NEDs are significantly related (β = -0.14, $p < 0.10$), MVE and NEDs are significantly related (β = -0.09, $p < 0.10$) and no of employees and NEDs are significantly related (β = 0.60, $p < 0.01$), value of R^2 for

all these models are 0.10, 0.10, 0.10 and 0.16 respectively. Hausman test (Table 3) shows that random effect regression is appropriate in all cases except number of employees-NED's relationship. Result of fixed/random effect regression shows a significant relationship between total assets and NEDs ($\beta = 0.27, p < 0.10$), MVE and NEDs ($\beta = 0.15, p < 0.10$) and number of employees and NEDs ($\beta = 0.60, p < 0.01$.) However, total sales and NEDs have no relationship (β = -0.21, ns). The value of R^2 for all the models is 0.03, 0.03, 0.03 and 0.10 respectively. Sign of coefficient is robust to different measures of size in fixed effects regression only. Significance and R^2 value change in case of different proxies.

Firm size and dividend policy: Results of relationship between size and dividend policy are reported in Table 9. Results of pooled OLS regression show that total assets and dividend policy are significantly related ($\beta = 2.48, p < 0.01$), total sales and dividend policy also significantly related ($\beta = 2.10, p < 0.05$) and MVE and dividend policy are also significantly related ($\beta = 2.10, p < 0.01$), but no of employees and dividend policy have no relationship (β = 1.48, ns), value of R^2 for all these models are 0.04, 0.03, 0.04 and 0.02 respectively. Hausman test (Table 3) shows that fixed effects regression is appropriate in all cases except number of employees-dividend policy relationship. Result of fixed/random effects regression shows a significant relationship between total assets and dividend policy ($\beta = 6.24, p < 0.01$), total sales and dividend policy ($\beta = 7.25, p < 0.01$) MVE and dividend policy ($\beta = 4.93, p < 0.01$), but no relationship between number of employees and dividend policy (β = 3.86, ns).Value of R^2 for all the relationships is 0.61, 0.62, 0.64 and 0.59 respectively. Sign of coefficient is robust to different measures of size in both OLS and fixed effect regression. Though, significance also appears to be robust in fixed effect regression but it changes its value in case of number of employees as proxy of size. R^2 value changes in case of different proxies.

TABLE 8

Regression Analysis of Firm Size (Total Asset, Total Sales, MVE and Number of Employees) and NEDs

	(1) Pooled OLS	(2) Pooled OLS	(3) Pooled OLS	(4) Pooled OLS	(5) RE	(6) RE	(7) RE	(8) RE
C	6.99***	8.27***	7.65***	2.47**	8.35***	7.67***	7.11***	12.14 ***
Business Segments	-0.42***	-0.42***	-0.41***	-0.41***	-0.13^{ns}	-0.14^{ns}	-0.18^{ns}	0.11^{ns}
Performance	-0.06***	-0.06***	-0.05***	-0.06***	0.00^{ns}	0.00^{ns}	0.01^{ns}	0.00^{ns}
Size: Ln(Assets)	-0.02^{ns}				0.27*			
Size: Ln(Sales)		-0.14*				-0.21^{ns}		
Size: Ln(MVE)			-0.09*				0.15*	
Size: Ln (No of employees)				0.60***				0.62***
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.10	0.10	0.10	0.16	0.03	0.03	0.03	0.10
#Observations	240	240	240	240	240	240	240	240

Explanatory Variable: NEDs

Models (1) to (4) represent simple pooled OLS results i.e., Common effect

Model (5) to (8) represent Fixed/Random effect regression based on results of Hausman test stated above

***, **,* represent 1%, 5% and 10% level of significance respectively; ns represents not-significant.

TABLE 9
Regression Analysis of Firm Size (Total Asset, Total Sales, MVE and Number of Employees) and Dividend policy

	(1) Pooled OLS	(2) Pooled OLS	(3) Pooled OLS	(4) Pooled OLS	(5) RE	(6) RE	(7) RE	(8) RE
C	-16.57*	-12.38^{ns}	-12.13^{ns}	-1.37^{ns}	-56.61***	-65.81***	-41.87***	-19.20^{ns}
DE	-1.56*	-1.40*	-1.47*	-1.36*	-0.40*	-0.14^{ns}	-0.13 ^{ns}	-0.20^{ns}
Size: Ln(Assets)	2.48***				6.24***			
Size: Ln(Sales)		2.10**				7.25***		
Size: Ln(MVE)			2.10***				4.93***	
Size: Ln (No of employees)				1.48^{ns}				3.86ns
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.04	0.03	0.04	0.02	0.61	0.62	0.64	0.59
#Observations	240	240	240	240	240	240	240	240

Explanatory Variable: divided policy
Models (1) to (4) represent simple pooled OLS results i.e., Common effect
Model (5) to (8) represent Fixed/Random effect regression based on results of Hausman test stated above
***, **,* represent 1%, 5% and 10% level of significance respectively; ns represents not-significant.

Sensitivity of firm size measures: Tables 10 and Table show the sensitivity of firm size measures to different practices of corporate finance based on R^2 and the sign and significance of the beta co-efficient. As hypothesized in H8, results show that different measures of firm size are differently related with different practices. Although results are robust in sign and significance in most cases, yet firm size does change its sign from one proxy to another, in some cases. These results are thus supporting hypothesis H8 and have important implications which will be discussed next.

DISCUSSION

This study aimed at examining the relationship between firm size (using different measures) and the practices of corporate finance in Sharī'ah compliant firms. Further, the study went on to examine sensitivity of firm size measures towards different practices of corporate finance. Overall the results are in line with the formulated hypotheses and support the notion that size is related to practices of corporate finance in Sharī'ah compliant firms, yet the relationship is different with the use of different proxies of size.

Firm size has no relationship to financial leverage was the first hypothesis of the study. Results show that all proxies of firm size are significantly related with leverage using both pooled OLS and fixed/random effect regression, except random effect regression of sales and leverage. These results thus doesn't support hypothesis H1. This shows that behavior of Sharī'ah compliant firms towards the relationship of size and leverage is same as that of conventional firms. Debt seems to be most appropriate solution of financing. As far as the sign of the relationship is concerned, our results showed a positive relationship between all proxies of size and leverage. Previously, Dang et al. (2018), Evan (2008), Gonenc, (2005), Rajan and Zingales (1995), and Schwartz and Van Tassel (1950), using conventional (i.e., non Sharī'ah compliant) firms had also found the same result.

With regard to the hypothesis H2, the results show a mixed relationship between size and CAPEX. Pooled regression shows significant relationship between size (as measured by MVE and number of employees) and CAPEX whereas fixed/random effects regression shows a significant relationship between size (as measured by assets, sales and MVE). As far as sign is concerned, the relationship is negative when size is measured by assets and sales (in case of fixed effects regression), else positive. Our results are in line with Dang et al. (2018), Daunfeldt and Hartwig (2013), and Hartwig (2012).

Hypothesis H3 of the study - firm size has a significant relationship with diversification is supported by the results when fixed effects regression was used. In pooled OLS, only market value of equity yields a significant relationship with diversification. Results also show that relationship is positive between all measures of size and diversification (i.e., no of business segments). With an increase in the size of a firm, resources also increase, which can make Sharī'ah complaint firms able to diversify their portfolio; thus a positive relationship between the two is evident. Dang et al., (2018), and Wilcox, Chang, and Grover (2001) also found the same results.

Firm size has a significant impact on firm performance was the fourth hypothesis of the study. Using ROA as a measure of performance, the study found support for the relationship between size and performance except for the number of employees-ROA (which is insignificant in both pooled and fixed effect regression). The relationship is positive when fixed effects regression is used, yet negative in pooled OLS in case of total assets-ROA and total sales-ROA. Dang et al. (2018) also found support for such a relationship. Agyei and Marfo-Yiadom (2011) also reported the same result using conventional stocks. Our results provide the insight into this relationship from Sharī'ah complaint stocks. Returns depend on profits. Profits are not guaranteed with size, rather they are dependent on operational performance; thus we can expect that the relationship would be bi-directional i.e., positive or negative in Sharī'ah complaint stocks.

Firm size has a significant impact on board structure was the fifth hypothesis of study. Using the number of NEDs as proxy for structure and composition of board, we found positive relationship between the two in majority of the cases. Results are in line with Dang et al. (2018). With increase in size of the firm, governance compliance becomes more important and regulatory authorities impose more strict regulations. Thus, larger firms appoint more NEDs. Further, increase in size means increase in shareholders and employees, thus an increase in NEDs. From an Islamic perspective, corporate governance gains more importance as Islam has presented different guidelines towards managing organizations and the behavior of individuals at work. So, a positive relationship can be expected between the two (size and corporate governance) from Sharī'ah complaint firms.

Firm size has a significant impact on dividend policy, the sixth hypothesis has also been supported. This result is in line with the previous research in this area e.g., Baker et al., (2007), Eriotis (2005), Uwuigbe et al. (2012) have all found a significant positive relationship between the size of a firm and its dividend policy. Large firms pay more dividend than smaller firms. The explanation of this result may be supported from Signalling theory of Ross (1977) according to which, large firms will give off more dividends to give a positive

signal to the market about the financial health of the company.

Last and arguably most important hypothesis of the study was that different measures of firm size have different sensitivities regarding different practices of corporate finance. The hypothesis has been fully supported from Sharī'ah complaint stocks. This was the main objective of the study. As previously mentioned this result is important and shows that different proxies have different explanatory powers towards different areas. Necessary care thus is required while selecting firm size proxy for studying any specific area relating to Sharī'ah complaint stocks. Dividend policy is the only area which appears to be most robust in our study based on sign and significance level. All other areas don't yield robust results especially for R^2. This unfortunately means that results of past studies using only single proxy and not providing any rationale for selection of that proxy of size should not be considered as the final result. For robustness, either all proxies shall be used or rationale must be provided. Choosing any single proxy is in itself a theoretical and empirical question.

TABLE 10
Sensitivity of Firm Size Measures in Pooled OLS regression

	Sign				Significance				R^2			
	Total Assets	Total Sales	MVE	Number of Employees	Total Assets	Total Sales	MVE	Number of Employees	Total Assets	Total Sales	MVE	Number of Employees
Financial leverage	+	+	+	+	<1%	<5%	<1%	<1%	0.10	0.08	0.13	0.11
CAPEX	+	+	+	+	>10%	>10%	<5%	<5%	0.01	0.01	0.02	0.02
Business Segments	+	-	+	-	>10%	>10%	<5%	>10%	0.02	0.02	0.04	0.02
ROA	-	-	+	+	<1%	>10%	<1%	>10%	0.09	0.09	0.23	0.09
NEDs	-	-	-	+	>10%	<10%	<10%	<1%	0.10	0.10	0.10	0.16
Dividend Policy	+	+	+	+	<1%	<5%	<1%	>10%	0.04	0.03	0.04	0.02

TABLE 11
Sensitivity of Firm Size Measures in Fixed/Random Effect Regression

	Sign				Significance				R^2			
	Total Assets	Total Sales	MVE	Number of Employees	Total Assets	Total Sales	MVE	Number of Employees	Total Assets	Total Sales	MVE	Number of Employees
Financial leverage	+	+	+	+	<5%	>10%	<1%	<5%	0.08	0.07	0.09	0.07
CAPEX	-	-	+	+	<5%	<5%	<10%	>10%	0.25	0.25	0.02	0.01
Business Segments	+	+	+	+	<1%	<1%	<1%	<1%	0.15	0.21	0.06	0.96
ROA	+	+	+	+	<1%	<1%	<1%	>10%	0.57	0.61	0.72	0.06
NEDs	-	-	-	-	<10%	>10%	<10%	<1%	0.03	0.03	0.03	0.90
Dividend Policy	+	+	+	+	<1%	<1%	<1%	>10%	0.61	0.62	0.64	0.59

CONCLUSION

The aim of the study was to examine the impact of different measures of firm size on six important areas of corporate finance which are: financial leverage, dividend policy, investment policy, diversification, firm performance and board's structure. Another major objective of the study was to check the sensitivity of different proxies of firm size on the practices of corporate finance. This study used KMI-30 index i.e., data of 30 firms that are Sharī'ah compliant. Overall results supported the hypotheses except one. The study concludes that different proxies of firm size are differently related with practices of corporate finance based on sign, significance and R^2.

All proxies capture different aspects of firm size and have different implications for corporate finance. Though, results are mostly robust when it comes to sign of coefficient in most areas but fir significance and R^2, different values have been noted. Different R^2 values for same area using different proxies suggest that some measures are more relevant to a particular area than others. Thus, this study confirms "measurement effect" in "size effect". Unfortunately, this means that many of past studies aren't robust and are biased. Researchers thus need to be careful when selecting any proxy of firm size for their research keeping in mind the scope and context of their work. Choosing a proxy thus is a theoretical and empirical question.

Our study has potential benefit for future researchers. We have shown that in KMI-30 firms, different proxies of size have different relationship with practices of corporate finance. Researchers can use our study to get justification for using any specific proxy in a specific area when dealing with Sharī'ah compliant firms. Our findings also suggest that Islamic investor needs to be cautious while selecting the portfolio. The study can be expanded in future in many ways: more indices of Sharī'ah compliant firms may be added to have more comprehensive results. Different other measures of size can be used to check for the sensitivity or robustness. The same work can be expanded to other markets like ASEAN, G7, Next Eleven (N-11), etc. Finally, it would be interesting to see the behaviour of the relationship of size and the practices of corporate finance, if the relationship is a non-linear one.

REFERENCES

Agrawal, A., & Knoeber, C. R. (1996). Firm performance and mechanisms to control agency problems between managers and shareholders. *Journal of Financial and Quantitative Analysis, 31*(3), 377-397. doi: https://doi.org/10.2307/2331397

Agyei, S. K., & Marfo-Yiadom, E. (2011). Dividend policy and bank performance in Ghana. *International Journal of Economics and Finance, 3*(4), 202-207. doi: https://doi.org/10.5539/ijef.v3n4p202

Ayub, M. (2007). *Understanding Islamic finance.* London, UK: John Wiley and Sons.

Azeem, M., Akbar, Z., & Usman, A. (2011). Investigating compliance of dividend policy with firm size: A case of Karachi stock exchange listed companies. *Interdisciplinary Journal of Contemporary Research in Business, 2*(11), 263-273.

Baker, H. K., Saadi, S., Dutta, S., & Gandhi, D. (2007). The perception of dividends by Canadian managers: New survey evidence. *International Journal of Managerial Finance, 3*(1), 70-91. doi: https://doi.org/10.1108/17439130710721662

Banchuenvijit, W., & Pariyanont, Y. (2012). Factors affecting the percentage change in stock prices of listed companies on the stock exchange of Thailand in the health sector. *University of the Thai Chamber of Commerce Journal, 32*(1), 50-64.

Cohen, W. M., & Klepper, S. (1996). Firm size and the nature of innovation within industries: The case of process and product R&D. *Review of Economics and Statistics, 78*(2), 232-243. doi: https://doi.org/10.2307/2109925

Coleman, S., & Cohn, R. (1999). Small firm use of leverage: A comparison of men and women-owned firms. Paper presented at the *United States Association for Small Business and Entrepreneurship,* San Diego, CA.

Coles, J. L., & Li, Z. F. (2012). *An empirical assessment of empirical corporate finance.* Retrieved from https://bit.ly/2Vva4lP

Coles, J. L., Daniel, N. D., & Naveen, L. (2006). Managerial incentives and risk-taking. *Journal of financial Economics, 79*(2), 431-468. doi: https://doi.org/10.1016/j.jfineco.2004.09.004

Connolly, R. A., & Hirschey, M. (2005). Firm size and the effect of R&D on Tobin's q. *R&D Management, 35*(2), 217-223. doi: https://doi.org/10.1111/j.1467-9310.2005.00384.x

Cooley, T. F., & Quadrini, V. (2001). Financial markets and firm dynamics. *American Economic Review, 91*(5), 1286-1310. doi: https://doi.org/10.1257/aer.91.5.1286

Damodaran, A. (2012). *Investment valuation: Tools and techniques for determining the value of any asset* (Vol. 666). Hoboken, NJ: John Wiley & Sons.

Dang, C., Li, Z. F., & Yang, C. (2018). Measuring firm size in empirical corporate finance. *Journal of Banking & Finance, 86,* 159-176. doi: https://doi.org/10.1016/j.jbankfin.2017.09.006

Daunfeldt, S. O., & Hartwig, F. (2014). What determines the use of capital budgeting methods? Evidence from Swedish listed companies. *Journal of Finance and Economics, 2*(4), 101-112. doi: https://doi.org/10.12691/jfe-2-4-1

Denis, D. J., Denis, D. K., & Sarin, A. (1997). Agency problems, equity ownership, and corporate diversification. *The Journal of Finance, 52*(1), 135-160. doi: https://doi.org/10.1111/j.1540-6261.1997.tb03811.x

Derigs, U., & Marzban, S. (2008). Review and analysis of current Sharī'ah-compliant equity screening practices. International *Journal of Islamic and Middle Eastern Finance and Management, 1*(4), 285-303. doi: https://doi.org/10.1108/17538390810919600

Deshmukh, S., Goel, A. M., & Howe, K. M. (2013). CEO overconfidence and dividend policy. *Journal of Financial Intermediation, 22*(3), 440-463. doi: https://doi.org/10.1016/j.jfi.2013.02.003

Dutton, Y. (2013). *The origins of Islamic law: The Qur'an, the Muwatta' and Madinan Amal.* London, UK: Routledge. doi: https://doi.org/10.4324/9780203036839

Ebel-Ezeoha, A. (2008). Firm size and corporate financial-leverage choice in a developing economy: Evidence from Nigeria. *The Journal of Risk Finance, 9*(4), 351-364. doi: https://doi.org/10.1108/15265940810895016

Eriotis, N. (2005). The effect of distributed earnings and size of the firm to its dividend policy: Some Greek data. *International Business & Economics Journal, 4*(1), 67-74.

Fama, E. F., & French, K. R. (2001). Disappearing dividends: Changing firm characteristics or lower propensity to pay? *Journal of Financial Economics, 60*(1), 3-43.

Frank, M. Z., & Goyal, V. K. (2003). Testing the pecking order theory of capital structure. *Journal of Financial Economics, 67*(2), 217-248. doi: https://doi.org/10.1016/S0304-405X(02)00252-0

Gonenc, H. (2005). Comparison of debt financing between international and domestic firms: Evidence from Turkey, Germany and UK. *International Journal of Managerial Finance, 1*(1), 49-68. doi: https://doi.org/10.1108/17439130510584883

Hart, P. E., & Oulton, N. (1996). Growth and size of firms. *The Economic Journal, 106*(438), 1242-1252. doi: https://doi.org/10.2307/2235518

Hartwig, F. (2012). *Four papers on top management's capital budgeting and accounting choices in practice* (Doctoral dissertation). Uppsala University, Uppsala, Sweden.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305-360. doi: https://doi.org/10.1016/0304-405X(76)90026-X

Karadeniz, E., Kandr, S. Y., Iskenderoglu, O., & Onal, Y. B. (2011). Firm size and capital structure decisions: Evidence from Turkish lodging companies. *International Journal of Economics and Financial Issues, 1*(1), 1-11.

Kurshev, A., & Strebulaev, I. A. (2008). Firm size and capital structure. Paper presented at the *AFA 2008 Annual Meeting,* The American Finance Association, New Orleans, LA.

Lee, J. (2009). Does size matter in firm performance? Evidence from US public firms. *International Journal of the Economics of Business, 16*(2), 189-203. doi: https://doi.org/10.1080/13571510902917400

Linck, J. S., Netter, J. M., & Yang, T. (2008). The determinants of board structure. *Journal of Financial Economics, 87*(2), 308-328. doi: https://doi.org/10.1016/j.jfineco.2007.03.004

Mayer, C. (1997). Corporate governance, competition, and performance. *Journal of Law and Society, 24*(1), 152-176. doi: https://doi.org/10.1111/1467-6478.00041

Mehran, H. (1995). Executive compensation structure, ownership, and firm performance. *Journal of Financial Economics, 38*(2), 163-184. doi: https://doi.org/10.1016/0304-405X(94)00809-F

Moeller, S. B., Schlingemann, F. P., & Stulz, R. M. (2004). Firm size and the gains from acquisitions. *Journal of Financial Economics, 73*(2), 201-228. doi: https://doi.org/10.1016/j.jfineco.2003.07.002

Nor, F. M., & Ariffi, B. (2006). *Pyramidal ownership structure, capital structure and investment policy: A case of Malaysian listed firms* (Unpublished dissertation), Universiti Kebangsaan Malaysia, Selangor, Malaysia.

Prowse, S. D. (1992). The structure of corporate ownership in Japan. *The Journal of Finance, 47*(3), 1121-1140. doi: https://doi.org/10.1111/j.1540-6261.1992.tb04007.x

Purkayastha, S., Manolova, T. S., & Edelman, L. F. (2012). Diversification and performance in developed and emerging market contexts: A review of the literature. *International Journal of Management Reviews, 14*(1), 18-38. doi: https://doi.org/10.1111/j.1468-2370.2011.00302.x

Rajan, R. G., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *The Journal of Finance, 50*(5), 1421-1460. doi: https://doi.org/10.1111/j.1540-6261.1995.tb05184.x

Rana, M. E., & Akhter, W. (2015). Performance of Islamic and conventional stock indices: Empirical evidence from an emerging economy. *Financial Innovation, 1*(1), 1-17. doi: https://doi.org/10.1186/s40854-015-0016-3

Ranti, U. O. (2013). The effects of board size and CEO duality on firms' capital structure: A study of selected listed firms in Nigeria. *Asian Economic and Financial Review, 3*(8), 1033-1043.

Reddy, K., Mirza, N., Naqvi, B., & Fu, M. (2017). Comparative risk adjusted performance of Islamic, socially responsible and conventional funds: Evidence from United Kingdom. *Economic Modelling, 66,* 233-243. doi: https://doi.org/10.1016/j.econmod.2017.07.007

Ross, S. A. (1977). The determination of financial structure: The incentive-signalling approach. *The Bell Journal of Economics, 8*(1), 23-40. doi: https://doi.org/10.2307/3003485

Saliha, T., & Abdessatar, A. (2011). The determinants of financial performance: An empirical test using the simultaneous equations method. *Economics and Finance Review, 10*(1), 1-19.

Schwartz, E., & Van Tassel, R. C. (1950). Some suggested changes in the corporate tax structure. *The Journal of Finance, 5*(4), 410-420. doi: https://doi.org/10.1111/j.1540-6261.1950.tb03804.x

Serrasqueiro, Z. S., & Nunes, P. M. (2008). Performance and size: Empirical evidence from Portuguese SMEs. *Small Business Economics, 31*(2), 195-217. doi: https://doi.org/10.1007/s11187-007-9092-8

Stierwald, A. (2009). *Determinants of firm profitability-the effect of productivity and its persistence* (Unpublished dissertation). The University of Melbourne, Melbourne, Australia.

Untoro, W., & Rahardian, R. (2015). Firm size and diversification strategies: Does labor intensity matter? *Corporate Ownership & Control, 12*(4), 327-331. doi: https://doi.org/10.22495/cocv12i4c2p8

Uwuigbe, U., Jafaru, J., & Ajayi, A. (2012). Dividend policy and firm performance: A study of listed firms in Nigeria. *Accounting and Management Information Systems, 11*(3), 442-454.

Waris, A., Hassan, H., Abbas, S., Mohsin, M., & Waqar, N. (2018). Sharia screening process: A comparison of Pakistan and Malaysia. *Asian Journal of Multidisciplinary Studies, 6*(5), 13-21.

Wilcox, H. D., Chang, K. C., & Grover, V. (2001). Valuation of mergers and acquisitions in the telecommunications industry: A study on diversification and firm size. *Information & Management, 38*(7), 459-471. doi: https://doi.org/10.1016/S0378-7206(00)00082-3

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